BY JAY GREENE

The two physician developers of Azyxxi—a unifying health-intelligence software program that enables hundreds of administrative and clinical systems to communicate with each other—listened to many offers to sell before Microsoft Corp. came a knockin’.

“We agonized for some time before deciding to do any deal,” says Craig Feied, M.D., former director of the Institute for Medical Informatics at MedStar Health, a six-hospital system based in Columbia, Md. “We had many suitors over the years asking to do a deal, and we always said ‘no.’ Hundreds of hospital CEOs have asked us to sell this system, but we needed to wait for the right commercial partner.”

Azyxxi (pronounced “Azixie” like “Trixie”) initially was developed in 1995 using Microsoft’s SQL Server database software. Feied and co-developer Mark Smith, M.D., have worked together on medical informatics since 1983.

“This health-intelligence engine I believe will solve a lot of unsolved problems in medicine today,” says Feied.

Smith, chairman of emergency medicine at MedStar’s 786-bed Washington (D.C.) Hospital Center.

“The big problem is data is localized in separate information silos. You get multiplicative power by bringing all that data together.”

Azyxxi works by managing hundreds of terabytes of live data from patient records that include electrocardiograms, scanned documents, X-rays, CT scans, magnetic resonance imaging scans, positron emission tomography scans, angiograms and ultrasound images. The program also integrates business, financial, administrative and vendor information, and stores historic data for quick retrieval.

“It will make any hospital program 10 times more effective,” Feied says. Smith adds: “It has the ability to transform healthcare in this country. The tools and the power of informatics have finally caught up with the vision and the need.”

Feied and Smith—two emergency physicians with decades of information technology experience—say Microsoft has the resources and the desire to successfully mass market Azyxxi.

“We went as far as we could go on our own,” says Feied, adding that MedStar did not have the financial resources and vendor support staff to sell and support Azyxxi. “Microsoft stands to be that vendor.”

Feied says when Microsoft inquired about purchasing Azyxxi
for an undisclosed amount, “We were thrilled. This is the best technology around in healthcare, and being picked up by the largest software company in the world will help us get this to every hospital.”

In September 2005, Microsoft entered the healthcare field when it formed its Health Solutions Group to tap into the federal government’s recent interest in helping providers implement electronic systems to reduce medical errors and costs, and improve quality and patient safety.

In July, the Institute of Medicine issued a report recommending that doctors and hospitals adopt e-prescribing by 2010 to reduce the estimated 1.5 million annual preventable drug errors.

Feied says while it may take some time for Microsoft to start selling Azyxxi commercially, “It will get done. You can’t scare Microsoft out of the market.”

Before the sale, Azyxxi was co-owned by two companies founded by Feied and Smith—Datomics Licensing and General Datomics—and MedStar Health. In a strategic alliance, Washington Hospital Center will serve as Microsoft’s development laboratory.

As part of the deal, 40 MedStar employees have become Microsoft employees, including Feied and Fidrik Iskandar, Azyxxi’s lead programmer who has been involved in the project since 1995.

Feied, who recently spent a day in orientation training at Microsoft, will become the general manager of Azyxxi development.

“It is quite different to be one day embedded in the health culture surrounded by patients and the next day around Microsoft people,” he says.

Smith, who remains at MedStar, will serve as chief liaison to Microsoft. “We developed Azyxxi because we wanted a system designed by clinicians, for clinicians,” he says. “It helps patient care, helps hospitals run better, and it helps the bottom line. … Microsoft is the right fit. I wanted to see Azyxxi acquired by a company that shared our vision of its potential.”

Before they went to medical school, Smith and Feied were trained in computer science.

Feied, a California native who graduated in 1978 with a degree in biophysics from the University of California at Berkeley, paid his way through medical school by forming his own information services mail-order company that developed software programs.

“I had formal training in engineering and computer science, but it was mostly in mainframes,” he says. In 1982, he received a medical degree from the University of California at San Diego.

“I will miss patient care,” says the 52-year-old Feied, who also is a professor of emergency medicine in the Georgetown University School of Medicine.

“As an ER doctor I cared for more than 50,000 patients, but I will be working on something that could affect millions of patients by reducing errors and improving decisionmaking,” he says. In 2005, Feied won Microsoft’s Physician of the Year Award.

Smith, who also is professor and chairman of emergency medicine at Georgetown, received a master’s degree in computer science from Stanford University in 1971.

“My observation back then, and it still holds true today, is that healthcare lags other industries by more than 20 years in the application of information technology to the service of its mission,” Smith says. “Most gratifying to me is that Azyxxi has enormous potential to transform healthcare and provide doctors with tools to save lives.”

First installed in 1996 in the emergency department at Washington Hospital Center, Azyxxi is now used in all of MedStar’s...
Columbia Department of Health for management of such mass-casualty incidents as a bioterrorism attack and in a variety of other settings in Arizona, Maryland and Virginia. The Cleveland Clinic recently installed the system in a pilot project as an imaging and data integration system.

“It has helped us double the amount of patients seen in the emergency department over the years,” Smith says, “and it has helped us improve processes of care and identify opportunities to save money, improve coding accuracy and billing.” But Azyxxi’s core contribution is to “help clinicians provide safer, better and faster care,” Smith says.

Feied says he plans to help further develop Azyxxi, but he also hopes to delve into other projects. “We want to develop the personal health record,” he says. “There will be a fair number of initiatives to tie hospitals back into the community through regional health information networks, where labs, hospitals, doctors, pharmacies and clinics share information to make it more accessible.”

Iskandar says Azyxxi interfaces with “hundreds of sources” at Washington Hospital Center. “It works seamlessly, with nearly instantaneous response time, and it is simple to use,” he says. “It takes five or 10 minutes … to learn the system.” It also is used by the District of Columbia Department of Health for management of such mass-casualty incidents as a bioterrorism attack and in a variety of other settings in Arizona, Maryland and Virginia. The Cleveland Clinic recently installed the system in a pilot project as an imaging and data integration system.

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